



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/607,120

06/26/2003

Norman C. Strole

RPS920030051US1

5586

47052

7590

10/06/2006

SAWYER LAW GROUP LLP
PO BOX 51418
PALO ALTO, CA 94303

EXAMINER

BARNES, CRYSTAL J

ART UNIT

PAPER NUMBER

2121

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,120

Applicant(s)

STROLE, NORMAN C.

Examiner

Crystal J. Barnes

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 26 June 2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. The following is a Non-Final Office Action upon examination of the above-identified application on the merits. Claims 1-49 are pending in this application.

Information Disclosure Statement

2. The examiner has considered the information disclosure statement (IDS) submitted on 26 June 2003.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference number 168 in figure 2 and step number 208 in figure 3 are not mentioned in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended.

Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: last occurrence of "step 206" on page 12 line 15 should be changed to "step 208" (see figure 3). Appropriate correction is required.

Claim Objections

5. Claims 15, 31 and 48 are objected to because of the following informalities: CAM table is not defined in the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-49 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,281,951 to Okayama.

As per claim 1, the Okayama reference discloses an apparatus for monitoring and control of a complex system comprising: a plurality of sensors (see column 5 lines 56-57, "multi-element fire detectors") for monitoring a plurality of attributes (see column 7 lines 10-14, "smoke, temperature, gas") of the complex system (see column 5 lines 41-42, "fire alarm system"); a table (see column 7 lines 26-28, "table of three fire decision values") including a plurality of entries ("12 combinations of sensor levels of three sensor portions"), each of the plurality of entries ("12

combinations of sensor levels of three sensor portions") indicating at least one action to be taken (see column 7 lines 42-57, "fire probability, level of degree of danger, level of smoldering fire probability") in response to a portion of the plurality of attributes ("smoke, temperature, gas") having particular values (see column 7 lines 58-60, "values in the range of 0 to 1"); and a network processor (see column 13 lines 14-20, "fire receiver or fire control panel RE") coupled with the plurality of sensors ("multi-element fire detectors") and with the table ("table of three fire decision values"), the network processor ("fire receiver or fire control panel RE") for receiving from the plurality of sensors ("multi-element fire detectors") a plurality of statuses ("sensor levels") for the plurality of attributes ("smoke, temperature, gas"), the network processor ("fire receiver or fire control panel RE") further for determining at least one entry ("decision") of the plurality of entries ("12 combinations of sensor levels of three sensor portions") to access based upon the plurality of statuses ("sensor levels"), and for accessing the at least one entry ("decision") to determine a corresponding action ("fire probability, level of degree of danger, level of smoldering fire probability").

As per claim 2, the Okayama reference discloses the plurality of entries ("12 combinations of sensor levels of three sensor portions") corresponds to a plurality

of values (see column 17 lines 64-65, "identification numbers") of a key (see figure 2, "pattern no."), wherein the network processor ("fire receiver or fire control panel RE") further determines at least one corresponding value of the key ("pattern no.") based upon a portion of the plurality of statuses ("sensor levels"), the network processor ("fire receiver or fire control panel RE") determining the at least one entry ("decision") by determining at least one match (see column 1 lines 36-42, "coincides") in the plurality of entries ("12 combinations of sensor levels of three sensor portions") for the at least one corresponding value of the key ("pattern no.").

As per claim 3, the Okayama reference discloses the at least one corresponding value of the key ("pattern no.") is based upon the portion of the plurality of statuses ("sensor levels of three sensor portions") from separate sensors ("smoke, temperature, gas") of the plurality of sensors ("multi-element fire detectors").

As per claim 4, the Okayama reference discloses the at least one corresponding value of the key ("pattern no.") is based upon the portion of the plurality of statuses ("sensor levels of three sensor portions") including more than one status ("smoke, temperature, gas") from a single sensor ("smoke sensor,

temperature sensor, gas sensor") of the plurality of sensors ("multi-element fire detectors").

As per claim 5, the Okayama reference discloses further comprising: a control station ("fire receiver or fire control panel RE") coupled to the plurality of sensors ("multi-element fire detectors") and the network processor ("fire receiver or fire control panel RE"), the control station ("fire receiver or fire control panel RE") receiving the plurality of statuses ("sensor levels of three sensor portions"), placing the plurality of statuses ("sensor levels of three sensor portions") in a plurality of packets (see column 8 lines 43-44, "signal transmission capability") and providing the plurality of packets ("signal transmission capability") to the network processor ("fire receiver or fire control panel RE").

As per claim 6, the Okayama reference discloses the control station ("fire receiver or fire control panel RE") places a portion of the statuses ("sensor levels of three sensor portions") from separate sensors ("smoke sensor, temperature sensor, gas sensor") of the plurality of sensors ("smoke sensor, temperature sensor, gas sensor") into a packet of the plurality of packets ("signal transmission capability").

As per claim 7, the Okayama reference discloses the control station ("fire receiver or fire control panel RE") places a portion of the status ("sensor levels of three sensor portions") into a packet of the plurality of packets ("signal transmission capability"), the portion of the statuses ("sensor levels of three sensor portions") including more than one status ("smoke, temperature, gas") from a single sensor ("smoke sensor, temperature sensor, gas sensor") of the plurality of sensors ("multi-element fire detectors").

As per claim 8, the Okayama reference discloses the packet has a plurality of status fields (see column 8 lines 13-14, "three input layers") for storing the portion of the plurality of statuses ("sensor levels of three sensor portions").

As per claim 9, the Okayama reference discloses the plurality of entries ("12 combinations of sensor levels of three sensor portions") corresponds to a plurality of values of a key ("pattern no."), wherein the network processor ("fire receiver or fire control panel RE") further determines at least one corresponding value of the key ("pattern no.") using a portion of the plurality of status fields ("three input layers"), the network processor ("fire receiver or fire control panel RE") determining the at least one entry ("decision") by determining at least one match

(see column 1 lines 36-42, "coincides") in the plurality of entries for the at least one corresponding value of the key ("pattern no.").

As per claim 10, the Okayama reference discloses the plurality of entries ("12 combinations of sensor levels of three sensor portions") corresponds to a plurality of values of a key ("pattern no."), wherein the network processor ("fire receiver or fire control panel RE") further determines at least one corresponding value of the key ("pattern no.") using a portion of the plurality of status fields ("three input layers"), the network processor ("fire receiver or fire control panel RE") determining the at least one entry ("decision") by determining at least one match (see column 1 lines 36-42, "coincides") in the plurality of entries for the at least one corresponding value of the key ("pattern no.").

As per claim 11, the Okayama reference discloses the corresponding action ("fire probability, level of degree of danger, level of smoldering fire probability") includes issuing (see column 5 lines 50-54, "receiving means") an alarm ("on/off fire alarm system") or a warning (see column 6 line 29, "display" and column 21 lines 10-12, "fire indication").

As per claim 12, the Okayama reference discloses the corresponding action ("fire probability, level of degree of danger, level of smoldering fire probability")

includes a dependent condition ("output layers") and wherein the network processor ("fire receiver or fire control panel RE") provides information to a system processor (see column 12 lines 46-53, "net structure") for further analysis ("interpolation").

As per claim 13, the Okayama reference discloses the corresponding action ("fire probability, level of degree of danger, level of smoldering fire probability") includes continuing normal operation (see column 13 lines 1-5, fire monitoring operation).

As per claim 14, the Okayama reference discloses the corresponding action ("fire probability, level of degree of danger, level of smoldering fire probability") includes using at least one ("smoke sensor, temperature sensor, gas sensor") of the plurality of sensors ("multi-element fire detectors") for closely monitoring a portion of the plurality of attributes ("smoke, temperature, gas").

As per claim 15, the Okayama reference discloses the table ("table") includes a CAM table (see column 6 lines 12, 16, 20, "constants table, terminal address table, definition table").

As per claim 16, the Okayama reference discloses the table ("table") includes a decision tree (see column 7 lines 26-27, "table of three fire decision values").

As per claim 17, the rejection of claim 1 is incorporated and further claim 17 contains limitations recited in claim 1; therefore claim 17 is rejected under the same rationale as claim 1.

As per claim 18, the rejection of claim 2 is incorporated and further claim 18 contains limitations recited in claim 2; therefore claim 18 is rejected under the same rationale as claim 2.

As per claim 19, the rejection of claim 3 is incorporated and further claim 19 contains limitations recited in claim 3; therefore claim 19 is rejected under the same rationale as claim 3.

As per claim 20, the rejection of claim 4 is incorporated and further claim 20 contains limitations recited in claim 4; therefore claim 20 is rejected under the same rationale as claim 4.

As per claim 21, the rejection of claim 5 is incorporated and further claim 21 contains limitations recited in claim 5; therefore claim 21 is rejected under the same rationale as claim 5.

As per claim 22, the rejection of claim 6 is incorporated and further claim 22 contains limitations recited in claim 6; therefore claim 22 is rejected under the same rationale as claim 6.

As per claim 23, the rejection of claim 7 is incorporated and further claim 23 contains limitations recited in claim 7; therefore claim 23 is rejected under the same rationale as claim 7.

As per claim 24, the rejection of claim 8 is incorporated and further claim 24 contains limitations recited in claim 8; therefore claim 24 is rejected under the same rationale as claim 8.

As per claim 25, the rejection of claim 9 is incorporated and further claim 25 contains limitations recited in claim 9; therefore claim 25 is rejected under the same rationale as claim 9.

As per claim 26, the rejection of claim 10 is incorporated and further claim 26 contains limitations recited in claim 10; therefore claim 26 is rejected under the same rationale as claim 10.

As per claim 27, the rejection of claim 11 is incorporated and further claim 27 contains limitations recited in claim 11; therefore claim 27 is rejected under the same rationale as claim 11.

As per claim 28, the rejection of claim 12 is incorporated and further claim 28 contains limitations recited in claim 12; therefore claim 28 is rejected under the same rationale as claim 12.

As per claim 29, the rejection of claim 13 is incorporated and further claim 29 contains limitations recited in claim 13; therefore claim 29 is rejected under the same rationale as claim 13.

As per claim 30, the rejection of claim 14 is incorporated and further claim 30 contains limitations recited in claim 14; therefore claim 30 is rejected under the same rationale as claim 14.

As per claim 31, the rejection of claim 15 is incorporated and further claim 31 contains limitations recited in claim 15; therefore claim 31 is rejected under the same rationale as claim 15.

As per claim 32, the rejection of claim 16 is incorporated and further claim 32 contains limitations recited in claim 16; therefore claim 32 is rejected under the same rationale as claim 16.

As per claim 33, the Okayama reference discloses further comprising the step of: implementing the at least one action (see column 21 lines 10-12, "fire indication").

As per claim 34, the rejection of claim 1 is incorporated and further claim 34 contains limitations recited in claim 1; therefore claim 34 is rejected under the same rationale as claim 1.

As per claim 35, the rejection of claim 2 is incorporated and further claim 35 contains limitations recited in claim 2; therefore claim 35 is rejected under the same rationale as claim 2.

As per claim 36, the rejection of claim 3 is incorporated and further claim 36 contains limitations recited in claim 3; therefore claim 36 is rejected under the same rationale as claim 3.

As per claim 37, the rejection of claim 4 is incorporated and further claim 37 contains limitations recited in claim 4; therefore claim 37 is rejected under the same rationale as claim 4.

As per claim 38, the rejection of claim 5 is incorporated and further claim 38 contains limitations recited in claim 5; therefore claim 38 is rejected under the same rationale as claim 5.

As per claim 39, the rejection of claim 6 is incorporated and further claim 39 contains limitations recited in claim 6; therefore claim 39 is rejected under the same rationale as claim 6.

As per claim 40, the rejection of claim 7 is incorporated and further claim 40 contains limitations recited in claim 7; therefore claim 40 is rejected under the same rationale as claim 7.

As per claim 41, the rejection of claim 8 is incorporated and further claim 41 contains limitations recited in claim 8; therefore claim 41 is rejected under the same rationale as claim 8.

As per claim 42, the rejection of claim 9 is incorporated and further claim 42 contains limitations recited in claim 9; therefore claim 42 is rejected under the same rationale as claim 9.

As per claim 43, the rejection of claim 10 is incorporated and further claim 43 contains limitations recited in claim 10; therefore claim 43 is rejected under the same rationale as claim 10.

As per claim 44, the rejection of claim 11 is incorporated and further claim 44 contains limitations recited in claim 11; therefore claim 44 is rejected under the same rationale as claim 11.

As per claim 45, the rejection of claim 12 is incorporated and further claim 45 contains limitations recited in claim 12; therefore claim 45 is rejected under the same rationale as claim 12.

As per claim 46, the rejection of claim 13 is incorporated and further claim 46 contains limitations recited in claim 13; therefore claim 46 is rejected under the same rationale as claim 13.

As per claim 47, the rejection of claim 14 is incorporated and further claim 47 contains limitations recited in claim 14; therefore claim 47 is rejected under the same rationale as claim 14.

As per claim 48, the rejection of claim 15 is incorporated and further claim 48 contains limitations recited in claim 15; therefore claim 48 is rejected under the same rationale as claim 15.

As per claim 49, the rejection of claim 16 is incorporated and further claim 49 contains limitations recited in claim 16; therefore claim 49 is rejected under the same rationale as claim 16.

8. Claims 1, 17 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,581,022 B2 to Murakami.

As per claim 1, the Murakami reference discloses an apparatus for monitoring and control of a complex system comprising: a plurality of sensors (see column 3 lines 40-42, "internal-air temperature sensor 14, an external air

temperature sensor 15, an engine-water temperature sensor 16, a sun load sensor 17 and a vehicle-speed sensor 18") for monitoring a plurality of attributes ("internal-air temperature, external air temperature, engine-water temperature, sun load and vehicle-speed") of the complex system (see column 1 lines 7-8, "air-conditioning apparatus of a vehicle"); a table (see column 3 lines 45-48, "a sensor-voltage-to-temperature conversion table 20, a sensor-failure substitute-value table 21") including a plurality of entries ("relations between the signals output by the sensors 14 to 18 and parameter values"), each of the plurality of entries ("relations between the signals output by the sensors 14 to 18 and parameter values, substitute value") indicating at least one action to be taken (see column 4 lines 49-60, "compute outlet temperature, control air-flow quantity of the blower 5, control switchable positions of the outlets flaps 10, and open air-mix flaps 9") in response to a portion of the plurality of attributes ("internal-air temperature, external air temperature, engine-water temperature, sun load and vehicle-speed") having particular values ("failure"); and a network processor (see column 3 lines 51-57, "input unit 19" and column 4 lines 4-7, "control unit 12") coupled with the plurality of sensors ("internal-air temperature sensor 14, an external air temperature sensor 15, an engine-water temperature sensor 16, a sun load sensor

17 and a vehicle-speed sensor 18") and with the table ("a sensor-voltage-to-temperature conversion table 20, a sensor-failure substitute-value table 21"), the network processor ("input unit 19, control unit 12") for receiving from the plurality of sensors ("internal-air temperature sensor 14, an external air temperature sensor 15, an engine-water temperature sensor 16, a sun load sensor 17 and a vehicle-speed sensor 18") a plurality of statuses (see columns 3-4 lines 66-7, "signals for set temperature, vehicle-internal temperature, vehicle-external-air temperature, engine-water temperature, sun load vehicle speed, failure status") for the plurality of attributes ("internal-air temperature, external air temperature, engine-water temperature, sun load and vehicle-speed"), the network processor ("input unit 19, control unit 12") further for determining at least one entry ("substitute value") of the plurality of entries ("relations between the signals output by the sensors 14 to 18 and parameter values, substitute value") to access based upon the plurality of statuses "signals for set temperature, vehicle-internal temperature, vehicle-external-air temperature, engine-water temperature, sun load vehicle speed, failure status"), and for accessing the at least one entry ("substitute value") to determine a corresponding action ("compute outlet

temperature, control air-flow quantity of the blower 5, control switchable positions of the outlets flaps 10, and open air-mix flaps 9").

As per claim 17, the rejection of claim 1 is incorporated and further claim 17 contains limitations recited in claim 1; therefore claim 17 is rejected under the same rationale as claim 1.

As per claim 34, the rejection of claim 1 is incorporated and further claim 34 contains limitations recited in claim 1; therefore claim 34 is rejected under the same rationale as claim 1.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to monitoring and controlling systems via lookup table in general:

USPN 6,975,635 B2 to Takeyama et al.

USPN 6,909,922 B2 to Tymchenko

USPN 6,812,853 B1 to Matsui

USPN 5,699,447 to Alumot et al.

USPN 4,873,655 to Kondraske

JPPN 4-84056 A to SAITO et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 571.272.3679. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571.272.3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in cursive script, reading "Crystal Barnes".

CJB

24 September 2006